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10/690,778	10/22/2003	Naoki Abe	CHA920030025US1	1597

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EXAMINER	
AUGUSTIN, EVENS J	
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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/690,778
Filing Date: October 22, 2003
Appellant(s): ABE ET AL.

Carl F. Ruoff
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on November 05, 2010 appealing from the Office action mailed on June 11, 2010.

(1) Real Party in Interest

The Examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The Examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-3, 5-11 are rejected; claims 1-3, 5-37 are pending and claims 12-37 have been withdrawn from consideration.

(4) Status of Amendments After Final

The Examiner has no comment on the Appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The Examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The Examiner has no comment on the Appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the Examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The Examiner has no comment on the copy of the appealed claims contained in the Appendix to the Appellant's brief.

(8) Evidence Relied Upon

20040044739	Ziegler	10-2002
20040060042	Douceur	9-2003
7096357	Kabushiki	3-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. Claims 1-3 and 5-11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ziegler (U.S. 2004/0044739) in view of Douceur (U.S. 2004/0060042) further in view of Tochikubo (U.S. 7,096,357).

2. As to claims 1, 3, 6-9, and 11, Ziegler shows:

a. A fraud detection system for detecting fraudulent transactions, comprising:

b. an interface **102** for inputting transaction data (via keyboard 108 and mouse 110) and outputting analysis results (on monitor 104); and

c. a tamper-resistant ("tamper proof server," [0112]) secure data processing unit (SDPU) **124**, wherein the SDPU includes:

d. a security system (HSM) that can restrict access to data and program execution [0232];

e. an analysis system for analyzing inputted transactions [0006];

f. a plurality of surveillance algorithms ("several securing functions," [0054] wherein the plurality of surveillance algorithms make a determination regarding a probability that inputted transactions are fraudulent ("if fraud is detected," Id.)

3. Zeigler does not expressly show:

g. a selection program for selecting at each of a sequence of random times a different surveillance algorithm to be used by the analysis system;

h. the selection program utilizes a random selection program for selecting surveillance algorithms;

i. measuring a randomness of the algorithm selection process using a technique selected from the group consisting of correlation and entropy measures; and

j. issuing an alert is the randomness goes under a predetermined threshold;

k. the surveillance algorithms are stored in an encrypted database; and

l. the further step of decrypting the selected surveillance algorithm..

4. However, Douceur shows random selection [0050] with a predefined correlation coefficient ("rho," [0067]) and the calculation of the correlation coefficient from already generated random values [0074]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the teachings of Ziegler to add the calculations and selection method of Douceur so that a comparison of the predefined rho and the calculated rho would trigger an alert as taught by Ziegler if the difference exceeded a threshold. The random selection of algorithms would allow for a more secure system through the use differing algorithms but with efficiency near that of just using one algorithm because only one is in use at a time. The alert would allow for a notice that the system is not operating properly or has become too predictable. If the system becomes predictable, the added security of the rotating algorithms is diminished.

5. The Zeigler/Douceur combination does not expressly show:

m. the surveillance algorithms are stored in an encrypted database; and

n. the further step of decrypting the selected surveillance algorithm..

6. However, Tochikubo teaches an encrypted storage **13** of algorithms (C 4, LL 40-44) which requires that the algorithms be decrypted before use. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have further modified the

teachings of Zeigler to store the securing functions in an encrypted database and decrypt them before use in order to ensure that the algorithms cannot be tampered with.

7. As to claim 2, Zeigler further shows:

o. the SDPU further includes an algorithm performance system **1102** that assists the selection program in selecting surveillance algorithms [0062].

8. As to claim 5, Zeigler further shows:

p. the security system includes an encryption system for encrypting and decrypting data [0038].

9. As to claim 10, Zeigler further shows:

q. the SDPU prevents observation by an outside observer of which surveillance algorithm is selected (observation of the execution of the software would be an unauthorized access [0232]).

(10) Response to Argument

1. Appellant's arguments filed on November 05, 2010 have been fully considered but they are not persuasive.
2. **Appellants argue**: Firstly, an algorithm is a finite sequence of steps for solving a logical or mathematical problem (Computer Dictionary, 3rd Edition, Microsoft Press, Redmond, WA, 1997). Appellant's argument is centered around the alleged assertion that does not show the element "a plurality of surveillance

algorithms stored in an encrypted database wherein the plurality of surveillance algorithms make a determination regarding a probability that inputted transactions are fraudulent."

3. **Examiner's response**: The Examiner disagrees.
4. In particular, par. 182 of Ziegler teaches, inter alia, (1) in a deterministic state, (2) registered code has not been altered, (3) system has not been altered for purpose of fraud.
5. Ziegler's system has algorithms (par. 144), registered to a database of the system (par. 145), which determines the legitimacy of the customer, par. 52.
6. Regarding the probably of fraud, the invention by Ziegler determines and detects transaction fraud in real time (par. 110). Through the process of fraud determination and detection, a probably of fraud has to necessarily be part of that process.
7. **Appellants argue**: Douceur is not related to detecting fraud and is therefore not analogous art.
8. **Examiner's response**: The Examiner disagrees.
9. Douceur's invention is concerned with collecting input values, filtering those values a desired output values from the filter for the collected sample input values (par. 110). The aspect of filtering or evaluating an input for a desired output is portable and is applicable to Ziegler's invention. Therefore, it is certainly analogous art.

10. Douceur shows random selection [0050] with a predefined correlation coefficient ("rho," [0067]) and the calculation of the correlation coefficient from already generated random values [0074]. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified the teachings of Ziegler to add the calculations and selection method of Douceur so that a comparison of the predefined rho and the calculated rho would trigger an alert as taught by Ziegler if the difference exceeded a threshold. The random selection of algorithms would allow for a more secure system through the use differing algorithms but with efficiency near that of just using one algorithm because only one is in use at a time. The alert would allow for a notice that the system is not operating properly or has become too predictable. If the system becomes predictable, the added security of the rotating algorithms is diminished.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the Examiner in the Related Appeals and Interferences section of this Examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/EVENS J AUGUSTIN/
Primary Examiner, Art Unit 3621

Conferees:

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Supervisory Patent Examiner, Art Unit 3621

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